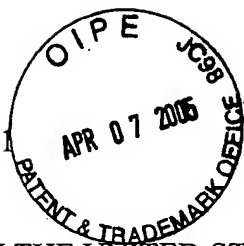


03500.017591



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
	:	Examiner: Sophia S. Chen
Masao UYAMA, et al.)	
	:	Group Art Unit: 2852
Application No.: 10/668,280)	
	:	Allowed: February 8, 2005
Filed: September 24, 2003)	
	:	Confirmation No. 3501
For: PROCESS CARTRIDGE AND)	
IMAGE FORMING APPARATUS IN WHICH	:	
THE CONTACT WIDTH OF A DEVELOPER)	
CHARGER WITH AN IMAGE BEARING	:	
MEMBER IS GREATER THAN OR EQUAL)	
TO THE SUM OF THE DEVELOPING	:	
WIDTH OF DEVELOPING MEANS AND)	April 7, 2005
THE WIDTH OF MOVEMENT OF THE	:	
DEVELOPER CHARGER)	

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR ENTRY OF
MARCH 23, 2005 AMENDMENT AFTER ALLOWANCE

Sir:

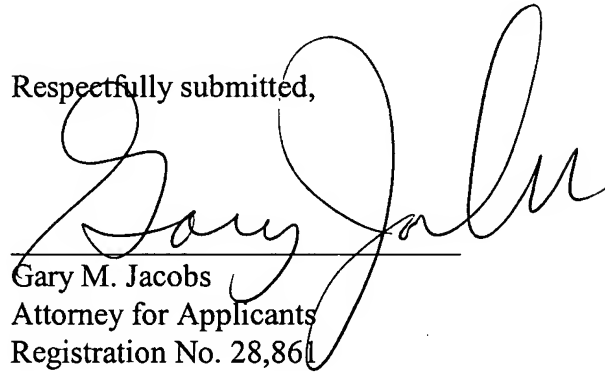
On March 23, 2005 Applicants filed an Amendment After Allowance. However, to-date, Applicants have not received any communication acknowledging entry of the Amendment After Allowance by the U.S. Patent and Trademark Office.

Accordingly, Applicants respectfully request that the Examiner issue a paper entering the March 23, 2005 Amendment After Allowance, since the Amendment After Allowance merely corrects minor informalities and typographical errors in the claims.

For the Examiner's convenience, attached is a copy of the March 23, 2005 Amendment After Allowance and a stamped receipt indicating the filing of the Amendment on March 23, 2005.

Applicants' undersigned attorney may be reached in our Washington office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Gary Jacobs", written over a horizontal line.

Gary M. Jacobs
Attorney for Applicants
Registration No. 28,861

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GMJ:ayr



Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date 03/23/05
Mo. Day Yr.

Atty. Docket 0350-017591

Application No. 12/668,280

Sir:

Kindly acknowledge receipt of the accompanying:

- ☐ Response to Official Action.
- ☐ Check for \$ _____ (claims fee)
- ☐ Petition under 37 CFR 1.136 and Check for \$ _____
- ☐ Notice of Appeal and Check for \$ _____
- ☐ Information Disclosure Statement, PTO-1449 and _____ documents
- ☐ Claim for priority and certified copies of _____ priority applications
- ☐ Issue fee transmittal and Check for \$ _____
- ☒ Other (specify) Amendment After Allowance of Transmittal

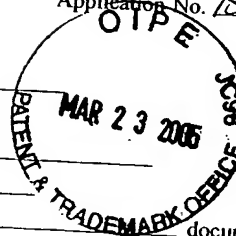
by placing your receiving date stamp hereon and returning to deliverer.

Atty. GM/kyr

Due Date 05/09/05
Mo. Day Yr.

By H/1

FD-350-00



A circular stamp from the Office of Intellectual Property and Economic (O.I.P.E.). The text "O.I.P.E." is at the top, "JC98" is at the top right, "APR 07 2005" is in the center, and "PATENT & TRADEMARK OFFICE" is at the bottom.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Prior to payment of the Issue Fee, please amend the application as follows.

IN THE CLAIMS:

Please amend Claims 6, 18, and 33 as follows:

1. (Previously Presented) A process cartridge detachably attachable to a body of an image forming apparatus, comprising:

an image bearing member;

a developing device configured and positioned to develop an electrostatic image formed on said image bearing member by using developer to form a developer image on said image bearing member; and

a developer charger configured and positioned to charge residual developer on said image bearing member disposed downstream, with respect to a moving direction of said image bearing member, of a transferring position at which said developer image is transferred onto a transfer member and upstream, with respect to the moving direction of said image bearing member, of a position at which the electrostatic image is formed on said image bearing member,

said developer charger being disposed to contact said image bearing member, and

said developer charger being movable in a direction substantially the same as the longitudinal direction of said image bearing member upon charging said residual developer,

wherein in the direction substantially the same as the longitudinal direction of said image bearing member, when L1 denotes the developing width of said developing device, L2 denotes the contact width of said developer charger with said image bearing member, and d denotes the width of movement of said developer charger, the following condition is satisfied:

$$L1 + d \leq L2.$$

2. (Previously Presented) A process cartridge according claim 1,
further comprising a charging device configured and positioned to charge said image
bearing member for allowing formation of said electrostatic image,

wherein when L3 denotes the charging width of said charging device in a direction
substantially the same as the longitudinal direction of said image bearing member, the following
condition is satisfied:

$$L1 + 2d \leq L3.$$

3. (Previously Presented) A process cartridge according to claim 1,
wherein the body of the apparatus has a transferring device configured and positioned to
transfer the developer image onto the transfer member at the transferring position, and

wherein when L4 denotes the transferring width of the transferring device in a direction
substantially the same as the longitudinal direction of said image bearing member, the following
condition is satisfied:

$$L1 + 2d \leq L4.$$

4. (Previously Presented) A process cartridge according to claim 1, wherein when L5
denotes the length of a chargeable portion of said image bearing member in a direction
substantially the same as the longitudinal direction of said image bearing member, the following
condition is satisfied:

$$L2 \leq L5 - d.$$

5. (Previously Presented) A process cartridge according to claim 2, wherein when L5 denotes the length of a chargeable portion of said image bearing member in a direction substantially the same as the longitudinal direction of the image bearing member, the following condition is satisfied:

$$L3 \leq L5.$$

6. (Currently Amended) A process cartridge according to claim 1, wherein the body of the apparatus includes:

a transferring device means configured and positioned to transfer the developer image onto the transfer member at the transferring position; and

a cleaning device configured and positioned to remove developer on the transfer member, and

wherein when L6 denotes the cleaning width of the cleaning device in a direction substantially the same as the longitudinal direction of the image bearing member, the following condition is satisfied:

$$L1 + 2d \leq L6.$$

7. (Previously Presented) A process cartridge according to claim 1, wherein upon charging said residual developer, said developer charger can reciprocate in a direction substantially the same as the longitudinal direction of said image bearing member.

8. (Previously Presented) A process cartridge according to claim 1, wherein a DC voltage having a charge polarity the same as a normal charge polarity of the developer is applied to said developer charger.

9. (Previously Presented) A process cartridge according to claim 1, wherein said developer charger has a fiber brush portion that is in contact with said image bearing member.

10. (Previously Presented) A process cartridge according to claim 1, wherein said developing device is capable of recovering residual developer on said image bearing member.

11. (Previously Presented) A process cartridge according to claim 2, wherein said charging device is disposed in contact with said image bearing member.

12. (Previously Presented) A process cartridge according to claim 2, wherein an oscillating voltage is applied to said charging device.

13. (Previously Presented) A process cartridge according to claim 12, wherein said charging device reduces the charge amount of developer remaining on said image bearing member.

14. (Previously Presented) A process cartridge according to claim 1, further comprising a second developer charger configured and positioned to charge residual developer on said image bearing member with a charge polarity reverse to a normal charge polarity of developer that is disposed downstream, with respect to the moving direction of said image bearing member, of the transferring position and upstream, with respect to the moving direction of said image bearing member, of said developer charger,

said second developer charger being disposed to contact said image bearing member, and said second developer charger being movable in a direction substantially the same as the longitudinal direction of said image bearing member.

15. (Previously Presented) A process cartridge according to claim 14, wherein said second developer charger is capable of reciprocating in a direction substantially the same as the longitudinal direction of the image bearing member.

16. (Previously Presented) A process cartridge according to claim 14, wherein said second developer charger has a fiber brush portion that is in contact with said image bearing member.

17. (Previously Presented) A process cartridge according to claim 14, wherein the contact width of said second developer charger and said image bearing member is substantially the same as the contact width of said developer charger and said image

bearing member in a direction substantially the same as the longitudinal direction of said image bearing member, and

wherein the width of movement of said second developer charger is substantially the same as the width of movement of said developer charger.

18. (Currently Amended) An image forming apparatus comprising:

an image bearing member;

a developing device configured and positioned to develop an electrostatic image formed on said image bearing member by using developer to form a developer image on said image bearing member; and

a developer charger configured and positioned to charge residual developer on said image bearing member disposed downstream, with respect to a moving direction of said image bearing member, of a transferring position at which said developer image is transferred onto a transfer member and upstream, with respect to the moving direction of said image bearing member, of a position at which the electrostatic image is formed on said image bearing member,

said developer charger being disposed to contact said image bearing member, and

said developer charger being movable in a direction substantially the same as the longitudinal direction of said image bearing member upon charging said residual developer,

wherein in a direction substantially the same as the longitudinal direction of said image bearing member, when L1 denotes the developing width of said developing device, L2 denotes the contact width of said developer charger with said image bearing member, and d denotes the

width of movement of said developer ~~charger~~ charging means, the following condition is satisfied:

$$L1 + d \leq L2.$$

19. (Previously Presented) An image forming apparatus according to claim 18, further comprising a charging device configured and positioned to charge said image bearing member for allowing formation of said electrostatic image, wherein when L3 denotes the charging width of said charging device in a direction substantially the same as the longitudinal direction of said image bearing member, the following condition is satisfied:

$$L1 + 2d \leq L3.$$

20. (Previously Presented) An image forming apparatus according to claim 18, further comprising a transferring device configured and positioned to transfer the developer image onto the transfer member at the transferring position,

wherein when L4 denotes the transferring width of said transferring device in a direction substantially the same as the longitudinal direction of said image bearing member, the following condition is satisfied:

$$L1 + 2d \leq L4.$$

21. (Previously Presented) An image forming apparatus according to claim 18, wherein when L5 denotes the length of a chargeable portion of said image bearing member in a direction

substantially the same as the longitudinal direction of said image bearing member, the following condition is satisfied:

$$L2 \leq L5 - d.$$

22. (Previously Presented) An image forming apparatus according to claim 19, wherein when L5 denotes the length of a chargeable portion of said image bearing member in a direction substantially the same as the longitudinal direction of the image bearing member, the following condition is satisfied:

$$L3 \leq L5.$$

23. (Previously Presented) An image forming apparatus according to claim 18, further comprising:

a transferring device configured and positioned to transfer the developer image onto the transfer member at the transferring position; and

a cleaning device configured and positioned to remove developer on the transfer member, wherein when L6 denotes the cleaning width of said cleaning device in a direction substantially the same as the longitudinal direction of the image bearing member, the following condition is satisfied:

$$L1 + 2d \leq L6.$$

24. (Previously Presented) An image forming apparatus according to claim 18, further comprising:

a carrying member configured and positioned to carry the transfer member and conveying the transfer member to the transferring position;

a transferring device configured and positioned to transfer the developer image onto the transfer member at the transferring position; and

a cleaning device configured and positioned to remove developer on said image bearing member,

wherein when L6 denotes the cleaning width of said cleaning device in a direction substantially the same as the longitudinal direction of said image bearing member, the following condition is satisfied:

$$L1 + 2d \leq L6.$$

25. (Previously Presented) An image forming apparatus according to claim 18, wherein upon charging said residual developer, said developer charger can reciprocate in a direction substantially the same as the longitudinal direction of said image bearing member.

26. (Previously Presented) An image forming apparatus according to claim 18, wherein a DC voltage having a charge polarity the same as a normal charge polarity of the developer is applied to said developer charger.

27. (Previously Presented) An image forming apparatus according to claim 18, wherein said developer charger has a fiber brush portion that is in contact with said image bearing member.

28. (Previously Presented) An image forming apparatus according to claim 18, wherein said developing device is capable of recovering residual developer on said image bearing member.

29. (Previously Presented) An image forming apparatus according to claim 19, wherein said charging device is disposed in contact with said image bearing member.

30. (Previously Presented) An image forming apparatus according to claim 19, wherein an oscillating voltage is applied to said charging device.

31. (Previously Presented) An image forming apparatus according to claim 30, wherein said charging device reduces the charge amount of developer remaining on said image bearing member.

32. (Previously Presented) An image forming apparatus according to claim 18, further comprising:

a second developer charger configured and positioned to charge residual developer on said image bearing member with a charge polarity reverse to a normal charge polarity of developer disposed downstream, with respect to the moving direction of said image bearing member, of the transferring position and upstream, with respect to the moving direction of said image bearing member, of said developer charger,

said second developer charger being disposed to contact said image bearing member, and

said second developer charger being movable in a direction substantially the same as a longitudinal direction of said image bearing member.

33. (Currently Amended) An image forming apparatus according to claim 32, wherein said second developer charger is capable of reciprocating in a direction substantially the same as the longitudinal direction of ~~the~~ said image bearing member.

34. (Previously Presented) An image forming apparatus according to claim 32, wherein said second developer charger has a fiber brush portion that is in contact with said image bearing member.

35. (Previously Presented) An image forming apparatus according to claim 32, wherein the contact width of said second developer charger and said image bearing member is substantially the same as the contact width of said developer charger and said image bearing member in a direction substantially the same as the longitudinal direction of said image bearing member, and

wherein the width of movement of said second developer charger is substantially the same as the width of movement of said developer charger.

36. (Previously Presented) An image forming apparatus according to claim 18, further comprising a plurality of image forming stations each of which has said image bearing member, said developing device, and said developer charger,

wherein developer images are transferred from said image bearing members of said respective image forming stations onto the transfer member that moves through said image forming stations.

37. (Previously Presented) An image forming apparatus according to claim 36, wherein the transfer member is an intermediate transferring member, and said developer images are transferred from said intermediate transferring member onto a transferring material.

38. (Previously Presented) An image forming apparatus according to claim 36, wherein the transfer member is a transferring material, and a transferring material carrying member that carries the transferring material moves through said image forming stations.

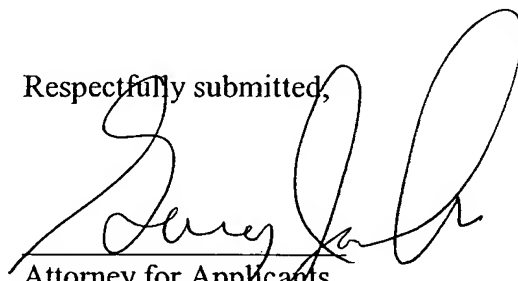
39. (Previously Presented) An image forming apparatus according to claim 36, wherein said image forming stations form developer images of different colors on the transfer member respectively.

Remarks

Claims 6, 18, and 33 have been amended solely to correct minor and typographical errors therein. As a result, this amendment is needed for proper protection of the invention and would require no substantial amount of additional work on the part of the Office. Accordingly, this amendment satisfies the criteria for entry of MPEP § 714.16 and such entry is respectfully solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



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